

Pacific Oceans. Mr. Darwin's specimen agrees in every respect with the description in the "Histoire des Poissons," except in having one ray more in the anal fin: its length is not quite five inches.

2. ACANTHURUS HUMERALIS. *Cuv. et Val.*

Acanthurus humeralis, *Cuv. et Val.* Hist. des Poiss. tom. x. p. 170.

FORM.—General form oblong-oval. Greatest depth just behind the insertions of the pectorals; contained exactly twice in the length of the oval of the body (measuring this last from the end of the snout to the base of the caudal spine), and three times in the entire length (measuring this last to the extremities of the lobes of the caudal fin.) Profile convex before the eyes, whence it descends nearly vertically to the mouth. Height of the head a little exceeding its own length. Eyes very high in the cheeks, and in front of each a grooved line passing horizontally forwards towards the nostrils; which last consist of two small round orifices, the anterior one larger than the other, and partially covered by a membranous flap. There are seventeen teeth in the upper jaw, and sixteen in the lower: those above have the cutting edges crenated, and likewise the lateral edges for nearly half way down; this most observable in the middle ones, in which the crenations amount to eight or ten in number: those below similar, but with the crenations not quite so numerous, and in some of the teeth at the sides of the jaw almost confined to the cutting edges. Scales minute; those taken from the middle of the body appear of an oblong form, their apical portions dotted, and ciliated with from twelve to eighteen very minute denticles, their surface marked with extremely fine delicate striæ, not distinguishable without a strong lens.

The lateral line follows the curvature of the back, at about one-fifth of the depth. The spine on the sides of the tail is strong, and sharp-pointed, and very slightly bent. No reclined spine before the dorsal. Both the fin just mentioned and the anal have their soft portions terminating posteriorly in rather an acute angle: also both have a scaly membrane at the base, and rows of minute scales between the soft rays extending for about one-third or more of their length. The first ray of the anal is very minute, and so much concealed in the skin as to be easily overlooked. The filaments of the caudal are sharp-pointed, and extend as far again as the middle rays: the upper one rather longer than the other. The pectorals are contained three times in the length of the oval of the body. Ventrals attached a little further back, sharp-pointed, and terminating in the same vertical line with the pectorals, both being laid back.

D. 9/23; A. 3/23; C. 16, &c.; P. 16; V. 1/5.

Length, to the end of the caudal lobes, 7 inches.

COLOUR.—The colours appear to have been exactly as described in the "Histoire des Poissons." Mr. Darwin's notes taken from the recent fish state, "splendid verditer blue and green;" but do not enter into the details of the markings.

Habitat, Tahiti.

Obtained at Tahiti, where it had been previously found by MM. Lesson and Garnot. Mr. Darwin's specimen accords with the characters given by Cuvier

and Valenciennes, except in having two soft rays less in the dorsal, and one less in the anal. Their description, however, is not very detailed.

FAMILY.—ATHERINIDÆ.

1. ATHERINA ARGENTINENSIS. *Cuv. et Val.?*

Atherina argentinensis, *Cuv. et Val.* Hist. des Poiss. tom. x. p. 350.

FORM.—Depth exactly one-sixth of the length, measuring this last to the end of the middle caudal rays. The length of the head is five and a-half times in the same, measuring this last to the end of the caudal lobes. Thickness of the body at least half the depth. Head broad and flat, its breadth across the crown behind the eyes equalling three-fourths of its depth. Snout rounded horizontally, but sharp vertically. The profile is perfectly horizontal; and one uniform straight line extends from the extremity of the upper jaw to the commencement of the second dorsal. Ventral line swelling a little outwards, with its greatest curvature about the middle. Upper jaw a very little longer than the lower, which ascends to meet it at an angle of 45°: gape not reaching more than half-way to the eye, at first horizontal, afterwards deflexed. In each jaw two rows of teeth, stronger and more developed than usual in this genus, widely asunder, and at irregular intervals: in the upper jaw these two rows are equal; in the lower the outer row is stronger than the inner: the outer row above contains about thirty-two or thirty-three teeth; that below twenty-six or twenty-eight: no teeth on the tongue, and scarcely any that can be seen on the vomer or palatines, though a slight roughness can be felt on the last two. Eyes moderately large; their diameter a very little less than one-fourth the length of the head; situate a little in advance of the middle point, and also a little above the middle of the depth. Cheeks and gill-covers scaly. Form of the scales of the body, as well as the number of longitudinal rows, exactly as stated by Cuvier and Valenciennes. The same may be said of the lateral line, and the situation of the dorsal fins. The second dorsal and anal terminate in the same vertical line. Pectorals exactly the length of the head. Ventrals attached immediately below the tips of the pectorals. Breadth of the silver band, which runs straight along the middle of the sides, exactly one-fifth of the greatest depth of the body.

D. 5—1/9; A. 1/19; C. 17, &c.; P. 15; V. 1/5.

Length 8 inches.

COLOUR.—"Silvery, with a silver lateral band: above bluish grey."—D. In spirits, it appears greenish brown, becoming deeper above the silver band and on the ridge of the back: the free margins of the scales are finely dotted with black: the rays of the caudal have been worn at the tips, but there is a trace of the dusky edging noticed by Cuvier: the pectorals are also stained with dusky.

Habitat Maldonado.

I conceive there is but little doubt of this being the *A. Argentinensis* of Cuvier and Valenciennes; but as the description in the "Histoire des Poissons" is short, I have thought it advisable to give a more detailed one of the above